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(71) Applicant (for all designated States except US): **CHAMPIONCHIP B.V. [NL/NL]; P.O. Box 6500, NL-6500 AR Nijmegen (NL).**

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MIKA, Harald [DE/DE]; Im Fronhof 7, 51429 Bergisch Gladbach (DE). MEIJER, Wilhelmus, Lambertus, Maria [NL/NL]; Jan Van Galenstraat 47, NL-6512 HH Nijmegen (NL).**

(74) Agent: **JORRITSMA, Ruurd; Nederlandsch Octrooibureau, Scheveningseweg 82, P.O. Box 29720, NL-2502 LS The Hague (NL).**

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **METHOD FOR MAKING INFORMATION AVAILABLE BY TELEPHONE**



(57) Abstract: Method for making available information relating to a sports event, comprising the following steps: collation of information relating to a plurality of participants in the sports event, such as passage times along a route (10) of the sports event, reception of a first message, the first message containing an identifier for the at least one participant (17) from the plurality of participants, extraction of information relating to the one participant (17) from the information collected, and transmission of a further message containing the extracted information relating to the one participant (17). The first message further contains a specific location (16) along the route (10) and the method comprises the following further steps: calculation of a predicted passage time of the one participant (17) at the specific location (16) from the information relating to the one participant (17) and inclusion of the estimated passage time for the one participant (17) in the further message.

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Method for making information available by telephone

The present invention relates to a method and installation for making available information relating to a sports event, comprising the step of collating information relating to a plurality of participants in the sports event.

A method and installation of this type are disclosed in US Patent US A 5 705 995, which describes an installation for the selective reception of centrally disseminated information and a method for storing the selected information in the installation. With this arrangement use is made of pager techniques known per se to disseminate information via a high frequency signal from a central transmitter to numerous (mobile) receivers. The information which is transmitted comprises category data and factual data, such as sports results, and, depending on the category data, the installation will or will not store and/or display the actual data.

However, this installation operates in a system for disseminating a large quantity of information from a central transmitter to multiple local receiver installations. Only in the local receiver installation is specific information selected from all information received, and displayed or stored.

In the case of major sports events the provision of information to the public with regard to individual participants is usually incomplete or incorrect. For example, when groups of participants start, the start time will be different for each participant, but in general only one general start time is displayed. A member of the public who wants information relating to one individual participant therefore has to make an appreciable mental effort in order to derive the individual data important to him or her, such as split times, average speeds and anticipated arrival time, from the data available to him/her.

The applicant submitting the present application has developed and introduced a system for a fully automated form of time recording at events of this type. By making use of passive transponders on each participant's body and antennae in mats that can be laid on the road, it has become possible to identify each participant at any desired location and to record (split) times. Fully automatic recording of both finish times and split times and start times has become possible.

The time recording system, also known by the name ChampionChip, is now being used for marathons, triathlons, mountain bike events, skating, cross-country skiing and even for motorised sports.

However, in order to provide every member of the public and/or participant with the desired information on an individual participant in the case of huge events, a very large, and consequently also not very clear, display screen would, for example, be needed at several locations. This again has the disadvantage that information relating to individual participants is not available to a member of the public at an arbitrary location.

The aim of the present application is therefore to provide a method and installation which makes it possible for a member of the public in an arbitrary location to be provided with information relating to one or more individual participants in a sports event.

Said aim is achieved by means of a method of the type defined in the preamble, wherein the method comprises the following further steps: reception of a first message, the first message containing an identifier for at least one participant amongst the plurality of participants, extraction of information relating to the at least one participant from the information collected and transmission of a further message containing the information extracted with regard to the at least one participant.

This method has the advantage that arbitrary members of the public are able to obtain information relating to one or more individual participants in the sports event, at an arbitrary location. The member of the public thus no longer has to make use of scoreboards or similar display screens, which may be placed at a central location.

In one embodiment of the method according to the present invention, the information relating to the at least one participant comprises passage times at points along a route for the sports event, such as start times, split times and/or finish times. Preferably, the first message further contains a specific location along the route and the method comprises the following further steps: calculation of an estimated or predicted passage time for the at least one participant at the specific location from the information relating to the at least one participant and incorporation of the estimated passage time for the at least one participant in the further message. By this means it is already possible at an early stage of a sports event to obtain an estimated passage time for one or more individual participants.

In one embodiment of the present method, the further message is transmitted as soon as at least two passage times for the at least one participant are available. It is thus possible to transmit the first message even before the sports event. The further message is transmitted as soon as sufficient data relating to the individual participant are known. Preferably, the estimated passage time is recalculated whenever a new passage time for the at least one participant becomes available. During the sports event a member of the public

thus obtains an increasingly more precise estimate of a predicted passage time at the specific location.

Preferably, receipt of the first message and transmission of the further message take place via a telephone link, such as with the aid of a mobile telephone belonging to the member of the public. Of course, the participant in the sports event can also make use of the present method using his or her own mobile telephone. This makes it possible for the member of the public who is in an arbitrary location, which does not even have to be close to the route, to obtain information relating to estimated passage times for an individual participant. In a further embodiment an SMS message is used for the first message and/or the further message.

A second aspect of the present invention relates to a system for making available information relating to a sports event, comprising a plurality of time recording installations for recording passage times of a plurality of participants in the sports event in a plurality of locations and a central processing installation, linked to the plurality of time recording installations, the central processing installation being equipped to perform the method according to the present invention. Preferably, the system is further provided with an interface connected to the central processing installation for receiving the first message and transmitting the further message.

The present invention will now be explained in more detail on the basis of a number of embodiments with reference to the appended drawings, in which:

Fig. 1 shows a simplified diagram of a route with start, finish and intermediate arrival points;

Fig. 2 shows, diagrammatically, an installation according to one embodiment of the present invention.

Up to 1994 time recording at huge active (not motorised) sports events on the road was as a rule carried out manually. Systems which made use of barcodes on the start number were the most sophisticated. In Fig. 1 a route for a sports event, such as a marathon, is shown in highly simplified form by a broken line 10, with start point 11 and finish point 12 and intermediate arrival points 13, 14 and 15. Only three intermediate arrival points 13, 14, 15 are indicated in Fig. 1, but this number of intermediate arrival points can be larger, for example at every 5 km point in the marathon. Reference numeral 16 indicates a point along the route where a member of the public watching the marathon is standing or will stand at a later point in time. Reference numeral 17 indicates a participant

who is running along the route. It will be clear that the number of intermediate arrival points 13, 14, 15 can be larger or smaller than indicated in this example and that the number of participants 17 will be very much higher at a genuine sports event.

5 The applicant submitting the present application has developed and introduced a system for a fully automated form of time recording at events of this type. By making use of passive transponders on the body of each participant 17 and antennas in mats that can be laid on the road, it was possible to identify every participant 17 at any desired location and to record (split) times. Fully automated recording of both finish, split and start times for a plurality of participants 17 was possible by, for example, placing the antennas and  
10 associated time recording installations at the start and finish points 11, 12 and at the intermediate arrival points 13, 14, 15.

The time recording system, also known by the name ChampionChip, is now being used for marathons, triathlons, mountain bike events, skating, cross-country skiing and even for motorised sports.

15 Fig. 2 shows, diagrammatically, an installation for recording and disseminating information relating to participants in a sports event, such as a marathon. A central processing installation 20 collects data relating to start, finish and split times for a plurality of participants 17, by means of the time recording installations 21, 22, 23 linked to the central processing installation 20, and stores these data, for example in a database (not  
20 shown). The time recording installations 21, 22, 23 can be placed at the intermediate arrival points 13, 14, 15 in Fig. 1 to record the passage times of participants 17 at the respective intermediate arrival points 13, 14, 15. Three time recording installations 21, 22, 23 are shown in Fig. 2, but it will be clear to a person skilled in the art that a plurality of time recording installations can be used, corresponding to the number of start, finish and  
25 intermediate arrival point locations 11 ... 15. The time recording installations 21, 22, 23 are able to transmit the data on the plurality of participants to the central processing installation 20 by means of all possible communication links, such as via telephone lines, wireless links, etc.

Now that data are collated automatically at competitions and pass directly via on-line  
30 links to the central processing unit 20, it is also possible to provide the organisers, the general public, both at the event and at home, and the media with results quickly. However, in order to provide every member of the public at huge events with the desired information on an individual participant 17 a very large, and consequently also unclear, display screen

would be needed, for example at several locations. This in turn has the disadvantage that information relating to individual participants is not available to a member of the public in an arbitrary location, for example the location shown by reference numeral 16 in Fig. 1.

The central processing installation 20 shown in Fig. 2 is therefore connected to an interface 24, by means of which two-way communication is possible with a communication unit 25. The communication unit 25 is, for example, a (mobile) telephone in the possession of the member of the public. As an alternative, the communication unit 25 can, for example, be a pager which is suitable for displaying a series of alphanumeric symbols.

The installation shown in Fig. 2 makes it possible for the member of the public to transmit a first message by means of communication unit 25, via interface 24, to the central processing installation 20, the first message containing an identifier for one of the participants 17. The central processing installation 20 is further equipped to extract the data relating to the one participant 17 from the data collated, for example in a database, and to incorporate the data relating to the one participant 17 in a further message. This further message is transmitted by the central processing installation 20, via interface 24, to the communication unit 25 belonging to the member of the public who transmitted the first message.

The installation shown in Fig. 2 therefore makes it possible to provide a member of the public in an arbitrary location with information relating to an individual participant 17 in a sports event. Of course, a member of the public can transmit multiple first messages in order to obtain information relating to several participants. As an alternative, a single first message can be transmitted containing the identifiers for several participants.

Of course, the central processing installation 20 can be equipped to collate and to disseminate data from different sports events, which may or may not take place simultaneously. For this purpose the first message must also contain an identifier for one of the events.

The communication between the central processing installation 20 and the communication unit 25 in the possession of the member of the public can be implemented in various forms. In one case the interface 24 is a modem and the communication installation 25 a, preferably mobile, telephone. In another case the interface 24 can form a link to the Internet and the communication unit 25 is, for example, a portable PC.

As an alternative, the first message containing an identifier for one or more

participants 17 can be compiled interactively. To this end, for example, a member of the public dials a telephone number that has been published beforehand by the organisers of the sports event. The first message can then be compiled interactively, for example by means of a so-called voice response system.

5 In a preferred embodiment of the present invention the central processing installation 20 is equipped to perform a calculation with regard to the data on the individual participant 17. In this embodiment it is possible, for example, for a member of the public to include in the first message not only an identifier for one individual participant 17 but also an indication of a specific point 16 along the route 10. The central processing installation 20 is  
10 then able, on the basis of available data on the participant 17 concerned, to calculate, for example, an estimated or predicted passage time at the specific point 16 and to include this in the further message. The member of the public then obtains a reasonably accurate estimate of the passage time of the participant 17 at the specific point 16.

As an alternative, a correction is made to the estimated passage time because, for  
15 example, it is known that the average speed of a participant will increase or decrease during the sports event. On the other hand, it is possible to apply a specific correction to the estimated passage time in order to ensure that the estimated passage time is not later than the actual passage time, by which means the member of the public will then in any event be at the specific location 16 in time.

20 It is possible for the member of the public to transmit the first message to the central processing installation 20 even before the start of the sports event. The further message is then transmitted only as soon as sufficient data (for example start time and first split time) have been collated in the central processing installation 20. As an alternative, the further message can also repeatedly be transmitted when further data relating to split times of the  
25 one participant 17 become available in the central processing installation 20. This leads to an increasingly more accurate estimate of the passage time at the specific location 16.

A specific example of the use of the installation and method according to the present invention will be given below. A member of the public is standing at the 30 km point of the New York marathon. The son of the member of the public has start number 1027 and is  
30 taking part and the member of the public wants to see him pass by. For this purpose the member of the public calls the telephone number that connects him to the central processing installation 20 and then keys in his son's start number. The available start and split times will now be reported via the central processing installation 20. The member of

the public then keys in his position along the route 10, in this case 30.0 km. The member of the public now hears or sees, via the central processing installation 20, the predicted time at which his son will arrive at the 30.0 km point.

5 Instead of exchanging data via a direct (mobile) telephone link, it is also possible for use to be made of SMS messages and for the further messages to be displayed on the screen of a mobile telephone as soon as times are available. From the point in time when two times are available it is possible to give a prediction of when the person in question will pass a specific location 16.

10 It is also possible to equip a specific Internet site for this method. Members of the public can visit the web page and there compose a first message, optionally interactively. The further messages can then, for example, be displayed on a personalised page for the member of the public concerned. As an alternative it is possible for the further messages to be transmitted as e-mail messages, which can be received by the member of the public in many ways (at home on a PC, via a pager or on a mobile telephone).

15 In the above description the central processing installation 20 is understood to be a computation unit that processes data, such as a computer controlled by software, where necessary with associated digital and/or analogue circuits. The central processing installation 20 can be provided with an individual processor, but can also be provided with multiple processors, optionally working in parallel. The central processing installation 20  
20 can also be provided with remote functionality, data processing taking place at various locations located some distance apart.



CLAIMS

1. Method for making available information relating to a sports event, comprising the step of collating information relating to a plurality of participants in the sports event,  
5 characterised in that the method comprises the following further steps:  
reception of a first message, the first message containing an identifier for at least one participant (17) amongst the plurality of participants;  
extraction of information relating to the at least one participant (17) from the information collected;  
10 transmission of a further message containing the information extracted with regard to the at least one participant (17).

2. Method according to Claim 1, wherein the information relating to the one participant (17) comprises passage times at points along a route (10) for the sports event:  
15

3. Method according to Claim 2, wherein the first message further contains a specific location (16) along the route (10) and the method comprises the following further steps:  
calculation of an estimated passage time for the at least one participant (17) at the specific location (16) from the information relating to the at least one participant (17) and  
20 incorporation of the estimated passage time for the at least one participant (17) in the further message.

4. Method according to Claim 2 or 3, wherein the further message is transmitted as soon as at least two passage times for the at least one participant (17) are available.  
25

5. Method according to Claim 3 or 4, wherein the estimated passage time of the at least one participant (17) is recalculated as soon as a new passage time for the at least one participant (17) becomes available.

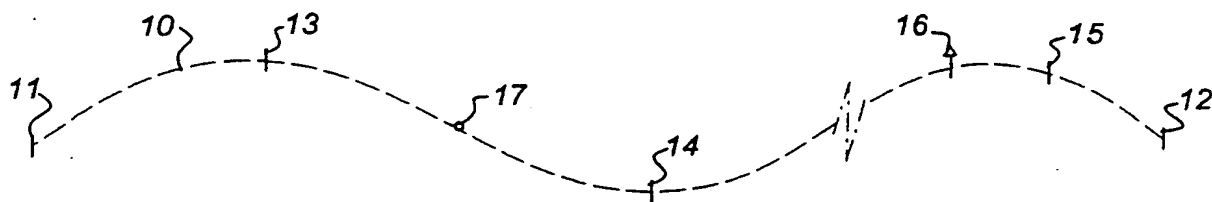
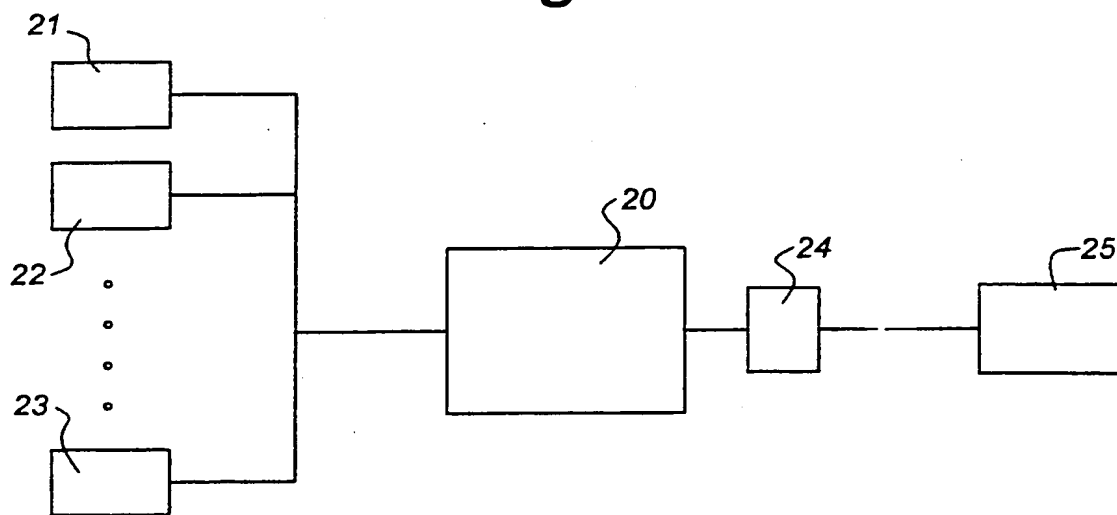
30 6. Method according to one of Claims 1 to 5, wherein receipt of the first message and transmission of the further message take place via a telephone link (24, 25).

7. Method according to one of Claims 1 to 6, wherein the first message and the

further message are SMS messages.

5 8. Installation for making available information relating to a sports event, comprising a plurality of time recording installations (21, 22, 23) for recording arrival times of a plurality of participants (17) in the sports event in a plurality of locations (11, 12, 13, 14, 15) and a central processing installation (20), linked to the plurality of time recording installations (21, 22, 23), the central processing installation (20) being equipped to perform the method according to one of Claims 1 to 7.

10 9. Installation according to Claim 8, wherein the installation further comprises an interface (24) connected to the central processing installation (20) for receiving the first message and transmitting the further message.

*Fig 1**Fig 2*

## INTERNATIONAL SEARCH REPORT

Int. Application No.

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A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G07C1/22

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G07C G04G G04F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

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Y	WO 97 41654 A (MCLORINAN ANDREW GEORGE ;TSOUKAS GEORGE JAMES (AU); ERICSSON TELEF) 6 November 1997 (1997-11-06) abstract; claims; figures page 1, line 5 -page 6, line 4	1,2,6-9
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040. Tx. 31 651 epo nl.  
Fax: (+31-70) 340-3016

Authorized officer

Meyl, D

# INTERNATIONAL SEARCH REPORT

Int. Patent Application No.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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